

SHOP talk

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Plant Operations Support Program

Spring 1999

Buildings on a Disk

Missing Link Found That Supports Automated Maintenance Systems

By Chuck Leyster, Facilities Planner, Engineering and Architectural Services, State of Washington

Digitized, linked and easily retrievable documentation of a building's architectural and engineering systems is crucial to any facility director who wants complete and efficient Computerized Maintenance Management Systems (CMMS). CMMS were once thought of as only work order systems, but are now taking on new and productive meaning. Today's CMMS provide rapid information access, retrieval, and reporting as they continue to move from departmentalized solutions to a system that can contribute to an institution's overall strategic goals.

"State and local agency top management is needing CMMS-type reports on a regular basis," said Gerald Hanlon, architect with GA's Engineering and Architectural Services. "From these reports management can determine if procedures are working as expected, and then use these data to judge the quality and success of facilities maintenance departments."



Gerald Hanlon, Architect
Engineering and Architectural Services

Over the last year Hanlon, Chuck Leyster and other professionals from the Division of Engineering and Architectural Services (E&AS), Department of General Administration, have been learning how facility operations information and manuals are acquired, stored and retrieved for use by facilities management and service personnel. We found that with CMMS, much of a facility's statistical data could be digitally stored and retrieved. However, according to maintenance department needs, there was one obvious missing component of information. This crucial missing link was the easy storage and easy retrieval of technical operations and maintenance drawings and manuals. Our review began by focusing on what data could be and is digitally stored, accessed, and retrieved from standard CMMS. Then we went hunting that missing link.

Typically, reporting and analysis is done in individual modules, such as equipment, asset, inventory, personnel and work orders. These reports provide information on failure and repair analyses, mean time between failures, equipment cost analyses, work order load leveling, life cycle reporting, productive vs. non-productive time analyses, and craft scheduling analyses. Many of the benefits of CMMS are derived from improvements made to operational procedures in maintenance departments.

Maintenance departments are now expected to contribute directly to the institution's strategies, improving product quality and making better use of existing resources. Departments become more economical by decreasing costs to maintain equipment, and making better use of personnel resources by increasing labor productivity. By gaining control of CMMS, management can now do a better job of scheduling maintenance personnel and materials.

During E&A Services' research and development of a system to provide this missing technological link, a number of management and maintenance department needs surfaced.

Please see Disk, page 8

- | | |
|---|--|
| 2 POS Notes, Governor Awards Consortium - Again! | 5 Final Installment, Don't Look Back, Jack! |
| 3 State Capitol Building Gets Tender Loving Care | 6 Community College Raves About Software |
| 4 Part 2, Training School Custodians | 7 Re-Cycle Expert Outlines Possibilities |

POS Notes

By Bob MacKenzie, Manager



Whoever said facilities management isn't exciting? These past months have seen a flurry of activity in member facilities, and innovative, creative use of scarce resources has been the rule, not the exception. Better weather has allowed a number of delayed capital projects to begin and others are being developed by using shared assets and leveraging cooperative opportunities.

It was great seeing so many participants at the March 16 videoconference on Innovative Maintenance Practices. Thanks to the presenters for taking time to provide detailed, relevant information in limited time frames. Mark your calendars for the next videoconference on October 20, 1999. The

topic is **Facilities Maintenance –Challenges of the New Millenium**. Many POS members have taken advantage of a POS Materials Exchange Inventory. Building materials donated by POS members are being recycled in dozens of projects throughout Washington and the Northwest.

We welcome **University of Washington** to our family of public facility managers. UW brings tremendous depth, staff expertise and prestige to the Consortium and promises to serve as a core of competency for doctrinal solutions. With any luck, WSU and other four-year degree granting institutions will

UW brings tremendous depth, staff expertise and prestige to the Consortium and promises to serve as a core of competency for doctrinal solutions.

soon follow. Every new member brings more resources and potential to the group, so it's to the advantage of all of us to spread the word. No less important and welcome are other new members: **Methow Valley SD, Sequim SD, Crescent SD and Wishkah Valley SD**. That brings the number of K-12 POS school district members to 29. Bear Holmes and his crew have joined us from **Renton Technical College**, as well. The **Port of Anacortes** has re-subscribed and we again welcome Bob Elsner and his staff of professionals to the Consortium. Bob Farrell and the fine folks of **Port of Sunnyside** have also opted to renew their membership – for two more years!

We're entering a new biennium for our Washington State members and we hope all will be sticking with us as we enter the new millenium. By the way, congratulations to every POS member: the Consortium was selected as a semi-finalist in the **Innovations in American Government** competition sponsored by the Ford Foundation through Harvard University. We're keeping our fingers crossed during the next round, because winning carries a sizable cash award that could help the Consortium better serve its members. We should hear the outcome in October.

I'll be representing the Consortium at the annual conference of the National Association of State Facilities Administrators in June. I'll report back to the Consortium in fall **Shop Talk**. If there are topics and issues you'd like me to surface there, please let me know. We hope you and your staff will join us at upcoming professional development events, including **Sustainable Buildings** on May 20th in Tumwater and **Universal Design** on May 21st in Lacey. Call us for more information @ (360) 902-7257. It is a pleasure supporting such a wonderful group of hard-working professionals. Thanks to POS members who have assisted us in resolving requests for assistance. Please continue to contact POS staff whenever you need help. Have a great spring and summer!

The Plant Operations Support Consortium

New members appear in green and renewing members are listed in gray type. Welcome and thanks on behalf of the Consortium!

Universities/Colleges

Cascadia/UW-Bothell
Bellevue CC
Big Bend CC
Clark College
Edmonds CC
Highline CC
Lower Columbia CC
Renton TC
Shoreline CC
Spokane, Dist. 17
South Seattle CC
Univ. of Washington

Municipalities

City of Tukwila
Clark County
Kitsap County
Lewis County

Pierce County
Whatcom County

Canada

Attorney General
BC Building Corporation
City of Vancouver

Ports

Port of Anacortes
Port of Edmonds
Port of Ephrata
Port of Longview
Port of Ridgefield
Port of Sunnyside

School Districts

Anacortes
Cascade

Chehalis
Columbia-Burbank
Coquitlam, BC
Crescent
Delta, BC
Eatonville
Enumclaw
Federal Way
Issaquah
Ketchikan, AK
Marysville
Methow Valley
Mission, BC
Mukilteo
Northshore
North Thurston
Oak Harbor
Ocean Beach
Peninsula

Renton
Rochester
Sequim
Snohomish
University Place
Wenatchee
White River
Wishkah Valley

States

Alaska
Oregon
Utah

Washington State Agencies

Corrections
Ecology
General Administration
Health

Information Services
Labor & Industries
Liquor Control Board
Military
Natural Resources
Parks & Recreation
School for the Deaf
Social & Health Services
Transportation
Veterans Affairs
Washington State Patrol

Washington State Capitol Gets TLC

By Angela Mapp

The Washington State Capitol building, also known as the Legislative Building, was completed in 1928. The only significant renovation since then was undertaken in 1987 to prepare for celebrations marking the state's centennial. At that time, the building's interior was painted.

As "The Leg" enters its eighth decade, Washington State's Department of General Administration (GA) is coming to grips with the building's aging process. The building's exterior is made of sandstone and thus, highly porous. Combined with the infamously wet climate of the Pacific Northwest, the sandstone is a perfect host for all manner of biological growth: moss, lichens, mold, and other such headaches of the facilities maintenance field.

In the summer and fall of 1998, the building's exterior was cleaned of the biological growth, and treated with a biocide agent to retard any further growth. The gutter at the base of the dome, where water seepage is the worst, was repaired with new caulking and flashing.



Washington State's Capitol

Since 1959, the Legislative Building has been cleaned every 10 years. The ultimate goal is to develop and implement an ongoing maintenance

plan to include all sandstone buildings on the capitol campus. Additional phases will be determined by legislative funding.

The interior of the capitol is in no better condition than its skin. In June 1997 an extensive condition analysis of the building's infrastructure was completed due to its deteriorated condition, age, inability to meet current demands and life safety code issues.

GA received funding for the 1997-1999 biennium to plan a future renovation of the building's infrastructure. In the planning process it became increasingly clear that the infrastructure problems were only part of the picture. The building is seriously overloaded. During legislative sessions the building houses more than three times the number of people for which it was built. Many office spaces don't meet fire and other safety code requirements, and the surrounding site poses significant barriers for persons with disabilities.

A three-pronged planning effort in the summer and fall of 1998 analyzed space needs, infrastructure upgrades, and site improvements.

"The building has been studied to death, and the problems behind the walls are becoming increasingly more visible," says Marygrace Jennings, community relations coordinator for the project.

A pre-design study, including proposed solutions, was completed in December 1998 and was presented to the Legislature this session for direction and funding. Options include an underground addition to the building, and/or remodeling a nearby building currently used for the State Library. The project should move into design in July 1999, with construction planned for May 2001.

Angela Map is an intern with GA's Division of Capitol Facilities. She can be reached @ (360) 753-5686.

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Shop Talk is a quarterly publication of the Plant Operations Support program. The newsletter is intended to be an informative and operationally-oriented medium for public facilities managers. Contents herein are also available on the program's web site at www.ga.wa.gov/plant

We welcome feedback on the newsletter's contents and input from readers. We reserve the right to edit correspondence to conform to space limitations. Bob MacKenzie is program manager and editor (360) 902-7257 or e-mail bmacken@ga.wa.gov. Karen Purtee serves as editorial assistant. Special thanks to Susanne Wegner for editing assistance. Plants Operations Support does not make warranty or representation, either expressed or implied, with respect to accuracy, completeness or utility of the information contained herein. Plants Operations Support assumes no liability of any kind whatsoever resulting from the use of, or reliance upon, any information contained in this newsletter.

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Training School Custodians --- Renton Develops Model Program 'Now we clean for health'

By Bob MacKenzie

Final installment of a two-part series on Renton's Custodial Training Program

Since running the first part of this series in winter **Shop Talk**, plant operations Support staff have been barraged with questions and requests for copies of Renton's innovative **Custodial Training Manual**. Joe Lamborn, Renton School District Operations Manager; Bill Griffin, president of Cleaning Consultant Services; Ray Vogel, Renton's custodial manager; and custodial staff collaboratively developed the innovative, effective training program that is worthy of emulation. This final installment examines the hands-on challenge of custodial training.

"When it comes to exactly how to present or conduct the training of cleaning workers you have many options," said Griffin. "These range from classroom presentations, to guest speakers, to the use of videotapes and written handouts or training manuals."



Rick Hale, custodian at Renton High School, reviews sections of the district's Custodial Handbook before beginning his shift.

Griffin pointed out the latest innovations include interactive computer and Internet-based training programs. Such programs operate on a computer, usually by way of a compact disk; incorporate video clips and audio; and allow the participant to interact in a variety of ways with the training program. At the same time an individual's progress is tracked and can be monitored by management to evaluate progress after each training session.

"For training to be effective it must be an ongoing process and not something that is only done when a worker is new on

the job," said Griffin. "In reality, training is a method of supervision. For maximum impact, all training programs should, at a minimum, include classroom presentations, hands-on practice on the job, and one-to-one discussions between each worker and his or her supervisor."

It is important to remember that people learn by doing, and at different levels of comprehension and speed, Griffin and Lamborn agree. "What you are attempting to do is provide an opportunity for learning to take place."

The Renton custodial staff chime in, "that you are dealing with a wide variety of individuals with different backgrounds, interests and abilities, all attempting to absorb and comprehend the same information."

They remind peers that, "one size does not fit all. Don't expect to get the same results with each worker. Realize that training is a process and getting the desired results takes time and a variety of approaches. Classrooms, videos and computers are great for presenting information, but if you want to change or improve performance, nothing beats 10 or 15 minutes of show, tell, and do, do."

The Custodial Handbook captures the essence of Renton's program. But, the down side is that, "hands-on training takes time, is uncomfortable for both parties, and is not nearly as easy as talking about what needs to be done," said Griffin.

"However, there is no better or more effective method of training available. When it comes to solving and preventing problems, reducing complaints, improving performance and developing a better relationship with your workers, hands-on training is always your best bet."

Please see Custodial, page 8

Ten Best Custodial Training Tips

1. Develop training as a method of supervision.
2. Start training each new employee with the first contact and never stop the process.
3. Conduct regular training sessions of not more than thirty minutes in length. Stress hands-on practice as opposed to talking or written materials. Observe the work being done to verify that actual learning has taken place.
4. Hold a training session at least once every 30 days, record attendance on a sign-in sheet and prepare a written agenda for each meeting.
5. Each meeting should deal with safety, cleaning procedures, health, and employee topics.
6. Use visuals, such as handouts, equipment, supplies, slides, videos and guest speakers.
8. Encourage and allow for employee involvement and participation.
9. Develop and utilize written procedures in the training process.
10. Tests, evaluations, and reviews should be based on one's ability to properly perform assigned tasks in a manner that obtains the desired results, not solely on one's ability to remember and recite material on written exams.

Don't Look Back, Jack!

By Karen Purtee, Shop Talk editorial assistant

The second and final installment in a series exploring training, education and certification avenues for Consortium members.

Welcome back! Are you ready to spread beyond short courses and day training? Are you looking toward the future and have a few years of experience under your belt? Are you ready for more, Jack? Do you want to advance to that higher-paid position? Are you able to keep up with the responsibilities and technical advances in facilities maintenance? Training will provide you with the tools to do the current job more efficiently, and the confidence to apply for the job you want tomorrow. Most employers realize the value of training, especially in highly-sophisticated fields - and maintenance today is an extremely technical world.

In winter *Shop Talk* we covered opportunities that range from building operator certification, to community college, to Master's level certificates on the Internet. The next topic to address is the professional associations and the courses they offer. Sifting through all of the courses provided by professional associations is not an overwhelming task. Besides gaining valuable knowledge, professional associations offer a range of prestigious letters to put after Jack's signature. So let's look at some of the letters.

CPE - Certified Plant Engineer is offered by the Association of Facility Engineers (AFE). Their webpage at www.afe.org/certif.htm asks if you are serious about your career, not just your job. Their program to earn the CPE designation is thorough and demanding. To begin with, you need an engineering degree with six years of experience, or no degree but eight years experience in plant/facilities engineering or six years of management-level experience in plant/facilities engineering. There is an exam to qualify for the CPE and then a recertification requirement every five years. To prepare for the exam the Association has developed *Review Pak*.

A second set of initials offered by AFE is the **CPMM** - Certified Plant Maintenance Manager. The CPMM represents in-depth expertise in plant and facilities maintenance management. It helps Jack remain current with the evolving techniques and technologies in maintenance management. The requirements include current employment as a maintenance professional and at least two years of experience in the field.

Shifting to another web page, we find APPA, the Association of Higher Education Facilities Officers at www.appa.org/education/institute with their professional education at the Institute for Facilities Management. Upon completing the weeklong session, students receive a certificate of completion in one of four core areas.

RPA, FMA, SMA and SMT are all designations from the BOMI Institute, a branch of BOMA (Building Owners and Managers Association). BOMA is highly-respected within the commercial property industry and has created its own institute for professional development. RPA is a Real Property Administrator; FMA stands for Facilities Management Administrator; SMA is the Systems Maintenance Administrator; and the SMT is the designation for Systems Maintenance Technician.

With all those choices there are also choices as to how you garner the credits to attain your initials. There are classroom offerings and self-study enrollment. Courses have Canadian versions to reflect the laws of that nation. Information about BOMA and the BOMI Institute can be found at www.bomi-edu.org.

The International Facility Management Association (IFMA) has a respected **CFM** designation, Certified Facility Manager. Self-study courses are available to expose the candidate to the eight areas of competency. The CFM proves that Jack is a competent facility professional through work experience, education and the ability to pass a comprehensive examination.



Ron Niemi, CFM

State Facility Manager and IFMA Vice- President,
South Puget Sound Chapter

"The IFMA Certified Facilities Manager designation is not only a matter of pride, it's a recognition of commitment and technical competence for prospective employers," said Ron Niemi, manager-planning, programming and fiscal branch of the Washington State's Department of Transportation Facilities Office. "I highly recommend facilities professionals consider the program, and our chapter will help them do it!"

Certification is good for three years and then a set number of points must be accrued for renewal. More information on CFM is available from IFMA at www.ifma.org.

The sky's the limit for today's Jack - so reach for the sky, Jack, and don't look back!

Education & Certification On the Web

AFE

www.afe.org/certif.htm

APPA

www.appa.org/education/institute

BOMI

www.bomi-edu.org

IFMA

www.ifma.org

POS

www.ga.wa.gov/plant

Community College Facilities Enhanced by Automation

Lower Columbia College Finds Benchmate® Works

By Bob Nichols, Benchmate President

Now, it's easy to use equipment maintenance software at Lower Columbia College (LCC), facilities staff and educators alike agree.

Lower Columbia College is nestled in a beautiful area of the Great Northwest, in "Weyerhaeuser Country," Longview, Washington. The college's small maintenance staff has to "do more with less" to keep up with a student population of 2,400, 35 acres, and 300,000 square feet within 25 buildings. Benchmate software for facilities maintenance management is now an integral part of LCC's internal computer network and provides a top-notch tool to keep ahead of the workload.

Dave Turpen, Campus Services Manager at LCC, has spent the better part of eight years trying to use equipment maintenance software that was cumbersome and time-consuming. One year ago, he stepped away from the state-provided software for community colleges, and selected Benchmate as the college's maintenance management software. He believed the software had the right mix of features for LCC; not too big, and not too small.

"Before Benchmate, we were using a software that was too big for our needs.

It had bells and whistles and lots of links. My maintenance guys couldn't use it. I had to hire a full-time office person just to run the program – put in data, generate reports, and close work orders," said Turpen. "I wanted a system that any maintenance person without computer training could use, and it had to be networkable so that people across campus could access it."

Turpen started sifting through software packages, looking for a full-featured program that wouldn't require a computer degree to operate. "As soon as I saw the Benchmate system, I knew it would work for us," he said.

Today, 28 people use the system in Campus Services, which includes shipping/receiving, maintenance, grounds, custodial, mail, security, motor pool, print, inventory, and environment quality.

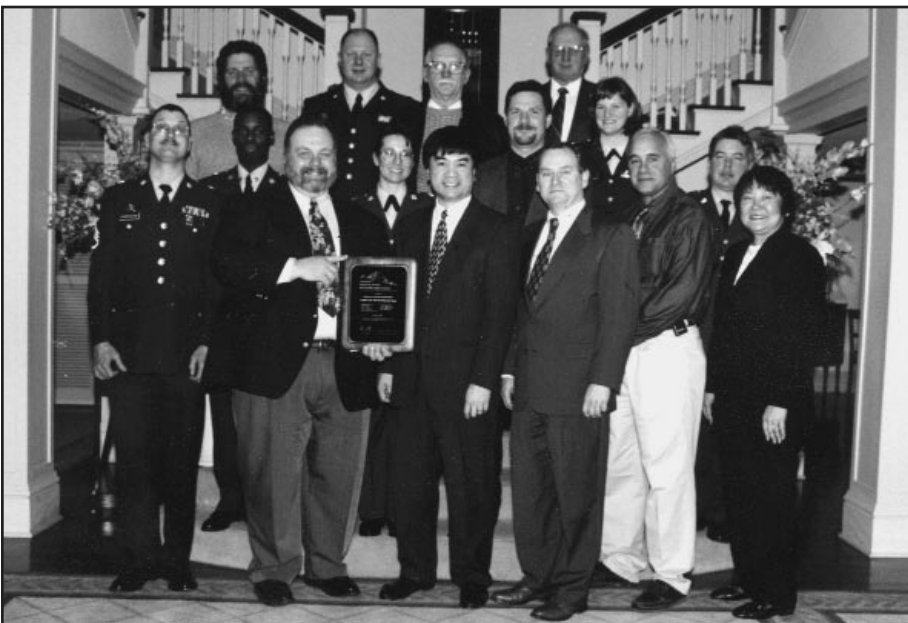
The system is modular, allowing LCC Campus Services to utilize specific functions at the right times. Its six components cover equipment, service log, spare parts, preventive maintenance, work orders, and trouble calls. Currently, all departments within Campus Services use the system primarily for work orders and equipment

maintenance. But, the professionals also use the software for preventive maintenance scheduling and tracking, as well. The system is part of the LCC internal network enabling staff across the campus to fill out and track work orders.

"I've found that the size of the college makes a difference in what maintenance software is most useful. For LCC, with limited budgets and resources, Benchmate is more appropriate," said Turpen. "The maintenance management software has saved us time, money, and paperwork, because anyone can electronically initiate and complete a work order."

With this system, LCC gets a user-friendly, modular system that works. Turpin and a growing number of Plant Operations Support Consortium members have found the system effective, and the Bellevue, Washington-based company responsive to their needs. For further information on Benchmate® maintenance management software, contact Bob Nichols @ 425/391-2752 or visit www.benchmate.com.

Consortium Members Receive Governor's Quality Award



A number of Consortium members received high praise from Governor Gary Locke during a ceremony on February 8 at the Governor's Mansion in Olympia. The event recognized recipients of the **Governor's Award for Service and Quality Improvement** for innovative use of re-cycled rail ties from the Heritage Park project. Consortium involvement saved the state more than \$58,000 and provided members with free landscaping materials. Consortium members included Jerry Sullivan (center, top) and Jim Tooley (far left, top) from Dept of Corrections; David Alves (third from right, first row) from Dept of Natural Resources; Mike Scott (second from right, 2nd row) from School for the Deaf; Andy Stepleton (holding plaque), Bob MacKenzie (third from right, first row) and Gary Larson (top row, right) from GA; and soldiers and officers from A Company, 181st Support Battalion, Washington National Guard. Governor Gary Locke (center) and Marsha Tadano Long, (far right) director of GA also are pictured. Not pictured are Mel Woods from Port of Ephrata, Chet Higgins from Lewis County, and Paul Replogle from Thurston County.

Universal Design Workshop to Explore Variety of Practical Innovations

By Bob MacKenzie

Bryon Vlier was a student at Western Michigan University when he designed and exhibited the Information Gate at last year's Designing for the 21st Century competition. The creation won a coveted Award of Excellence. The Gate replaces the traditional bulletin board with an electronic message center that allows users to find and meet each other in a virtual gathering place where they can leave and retrieve messages and postings. The Gate identifies the user by scanning their heat signature and self-adjusts to their height. A guide greets them in their native language.

The Delphi Transit Shelter, designed by Craig La Combe and Vincent Novak from Western Michigan University, joins a transit shelter with an information kiosk. The modular system allows users to wait in comfort and travel throughout the city regardless of age, physical abilities or language. Users can determine how to reach their destinations by retrieving information by voice activation, Braille keyboard, and touch screens.

These two innovative designs were related by way of "universality," says Carol Maher,



Carol Maher,
State ADA Facilities Coordinator

State ADA Facilities Coordinator. She is the shaker and mover behind a workshop scheduled for May 21, 1999 at St. Martin's College in Lacey, Washington.

The goal of the workshop on Universal Design in an Integrated Setting is to promote

a "universal perspective on design so that issues of access are not looked on as code, but as an integral part of the design," said Maher. "We want to have facilities people and architects working together to solve problems."

Maher emphasizes that the workshop is not intended solely for designers. Plant operations managers, engineers, ADA coordinators and facility planners will benefit from the program as well. Participants will participate in hands-on activities. For example, they will be given confronted with a structural barrier and be required to design and discuss solutions to an architectural problem or case study. Then, the participants will analyze the effectiveness of the design as it is used by people of varied abilities, structure, etc.

The workshop and lunch is free and "may be the most illuminating event you'll attend this year," said Maher.

Contact Carol Maher @ (360) 902-7210, or Email: cmaher@ga.wa.gov

Sustainability in Perspective

Recycling helps environment and your bottomline

By Stuart Simpson, Energy Engineer

Demolish or deconstruct? With rising costs of tipping fees at the landfills and concerns for the environment, (Remember the salmon? Catch one now or they will be gone) does it make sense to haul demolition waste to the landfill? Facility operators and project managers collectively have a significant impact on the environment with each decision regarding demolition waste. A vast network of recyclers has developed in the Northwest, making it economical and practical to recycle demolition and construction waste.

Consider recycling on your next demolition or remodel project.

The following items can be recycled for less than hauling to the landfill (for many areas of the state).

- Sheetrock (old and new, no lead paint)

- Wood (old, new, stumps, etc.--even with nails)
- Doors, molding, plumbing fixtures, windows, light fixtures, marble, etc. (For re-use, contractor will remove at no cost or will pay.)
- Ceiling tile (asbestos-free, vendor will haul. Used to make new tile.)
- Metal (T-bar ceiling, HVAC, piping, rebar, framing, etc.--may generate

Stuart Simpson
Energy Engineer
Department of General Administration

revenue.)

- Concrete (Crush on site or haul to vendor for crushing and resale.)
- Asphalt (Crush on site or haul to vendor for crushing and reuse.)
- Some roofing (asphalt shingles, wood shingles, metal, and some single membrane)

It is possible to recycle and/or reuse

80% to 90% of a demo or renovation project. The practice is not only feasible, in most cases it's very cost effective.

Additional benefits include local job creation, reduction in use of natural resources, reduction in landfill disposal, and most importantly to the project, savings in the project's budget.

Contact me if you are interested in making it happen on your project!

**Stuart Simpson, Energy Engineer,
Dept. of General Administration,
(360) 902-7199 <ssimpso@ga.wa.gov>**

Disk, (cont. from page 1)

Some of the most common challenges confronting facility maintenance management and personnel include:

- Organizing the vast variety of technical information sources used to operate and maintain a facility and making them easily retrievable.
- Documenting the personal knowledge gained and retained by individuals who have long and productive histories with the facility.
- Weeding out information in typical as-built drawings that's unnecessary for most facility management and maintenance personnel.
- Realizing that a useful storage and retrieval system must be flexible enough to support many different operations and maintenance philosophies.
- Keeping the operational information current--one of the biggest problems.

Washington State's E&A Services now is offering other institutions an **Operational Document Retrieval System**.

The OD Retrieval System is a freestanding system that can be used with or without the facility using a CMMS. The system is complementary to a CMMS but does not directly integrate with the system.

E&A Services provides a wide variety of customized digitizing and linking services to meet the individual needs of each client.

If you want to take advantage of the missing link or to ask questions, contact **Chuck Leyster, E&A Services, Department of General Administration, at 360-902-7236 or cleyste@ga.wa.gov**

Custodial (cont. from page 4)

Renton custodial staff, Vogel, Lamborn, and Griffin provide hints gleaned from many years of experience:

Keeping It in Perspective

- Don't expect results overnight. Training takes time. It's an investment that will pay dividends if you develop a structured plan that is based on the needs of your employees, customers and organization.
- Start by using the information you gather to put together a one-year training program outline. Next, establish subject matter and dates for training. Finally, identify who will make the presentations. If you have several workers or supervisors who do a great job in a certain task or area, involve them in the process.
- Keep accurate records of who completes each segment of the training program and don't let the shy ones or those who need the training the most slip through the cracks. At the end of the year, have a pot luck lunch or a pizza party and present a signed certificate of completion to those who successfully completed all aspects of the training program. See that a copy of the certificate is placed in each worker's personnel file.
- Good help is hard to find today. Some of your best workers may already be on the payroll. Your job as a supervisor or manager is to provide a framework and an environment that encourages each worker to do his or her best on the job each day.

The Renton professionals emphasize that training is needed at all levels of an organization including the custodian, supervisor, facilities director, principal, teachers, parents, students and school board members.



Tony Diaz, custodian at Renton High School, brushes up on sections of the district's Custodial Handbook.

"When everyone is involved in the learning process and understand each other's responsibilities, you are able to develop a team of people with similar goals that will support each other with cooperation, understanding and respect," said Ray Vogel. "In the long run this will result in a clean, safe, healthy and comfortable environment that will facilitate the learning process for students of all ages, backgrounds and abilities. And isn't that what cleaning schools is all about?"

Shop Talk gratefully acknowledges the assistance of Joe Lamborn and Bill Griffin in the development of this series.



Mark Your Calendars

May 2nd to May 6th, Annual Commissioning Conference, Portland
 May 14 to May 18, Lighting Lab Demonstration, Seattle.
 May 20th **Sustainable Buildings** panel discussion, sponsored by IFMA, in Tumwater
 May 21st **Universal Design** workshop in Lacey.